



FirstNet™

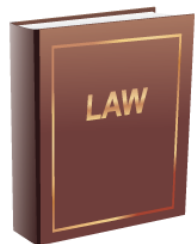


Identity, Credential, and Access Management (ICAM) National Strategy Summit

October 8 - 9, 2014

Ali Afrashteh, CTO, FirstNet

FirstNet Beginnings



THE LAW

2.22.12

FirstNet becomes law

PL 112-96

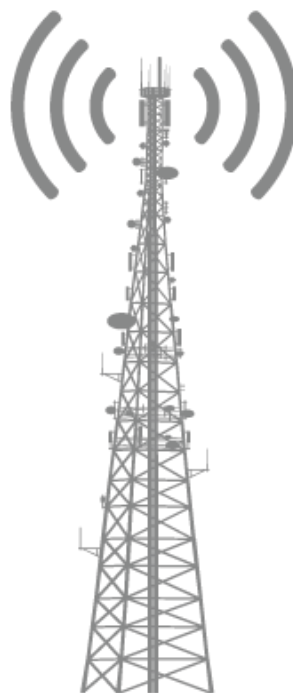
GOVERNANCE



FirstNet Board of directors' **15** members have backgrounds in police, fire, sheriff, Emergency medical, city government, and commercial telecommunications.

Governor appoints **1** Single Point of Contact (SPOC) and governing body to represent the state's interests to FirstNet.

40 member Public Safety Advisory Committee (PSAC) advises FirstNet on public safety intergovernmental matters



FUNDING



\$7B authorized to build the FirstNet network. Funded by spectrum auctions through 2022. The first auction netted



\$1.56B

20MHz of bandwidth has been dedicated to public safety in the prime **700MHz** frequency range.

Vision for Public Safety

The Long-Term Vision



Mobile Data Terminal -
FirstNet LTE Air Card



Mission Critical Data

Smart Devices
FirstNet LTE Service



Mission Critical Voice
Mission Critical Data

Specialty Devices
FirstNet LTE Service



Mission Critical Voice/Data

First Responders Deserve the Best Network



FirstNet will provide a reliable and resilient broadband network to perform life saving missions



Rugged, easy to use devices designed to meet public safety requirements and provide a rich set of applications and services



FirstNet will improve communications and save lives

ICAM Challenges

Devices can be shared by multiple users

- Cannot assume one-device-to-one-user

Local control of users' identities

- Provisioning of first responders, roles, and attributes
- Federation of over 60,000 public safety agencies

Role and attribute-based access control

- Authorization for services and applications
- Prioritization of public safety traffic during an incident

Management of diverse credentials

- Support multiple authentication methods
- Ease of use required in the field, i.e., Single Sign On (SSO)

ICAM Impact - Fighting CA Wildfires

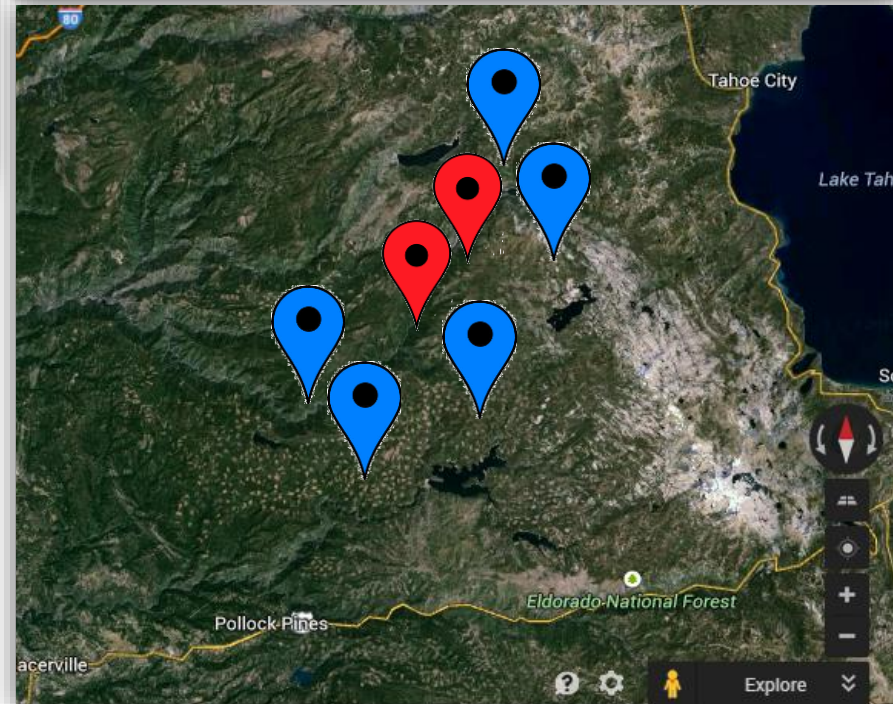


Benefits to First Responders

- Multi-agency coordination
- Incident Commander logs all personnel, identities, skills, location
- Wearable sensors provide real-time data on fire fighter health and wellness, i.e., blood pressure, heart rate, etc.

ICAM at Work

- On-boarding users from multiple agencies onto existing or deployable network
- Multiple users sharing devices
- Credentials with details on users' specialties, skills, medical history
- Sharing data between agencies and applications



ICAM Impact - Active Shooter (Navy Yard)



Benefits to First Responders

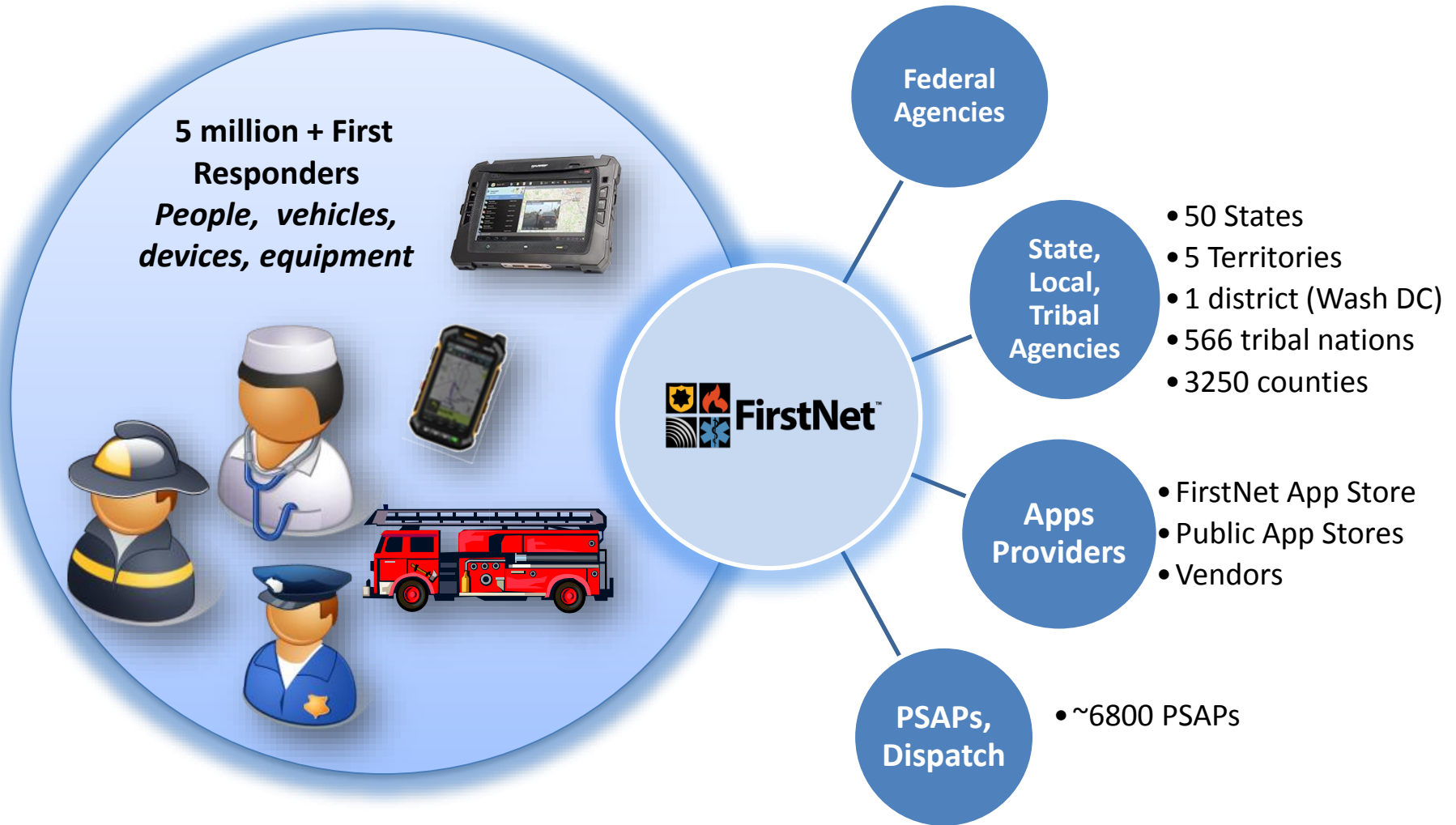
- Incident coordination of 117 first responders across different agencies
- Sharing of resource location, floor plans, map of military base, access to building, and video surveillance
- Prioritization, preemption of shared B14 network bandwidth

ICAM at Work

- On-boarding users from multiple agencies onto existing network
- Priority based upon roles and attributes
- Credentials with details on users' specialties, skills, medical history
- Sharing data between agencies and applications



The ICAM Challenge



On-boarding Challenge Across Diverse Set of Agencies

Key Principles of ICAM

Governance

- Provide and enforce common security policies, privacy policies, and operating guidelines for the sharing of identity information
- Federated, not centralized ICAM

Real-time Network Control

- Mapping of current user and device identities in the network
- Role and attribute-based priority, preemption of services and applications

Agency On-boarding

- Agencies are the source of their user's identities
- Leverage standard interfaces for agencies to interoperate with FirstNet

FirstNet Welcomes Your Input and Recommendations

Standard and Technology

- Standard and technology That will support FirstNet

Strategic Roadmap

- Balance existing technologies, capabilities, and standards with emerging or longer term developments

Alignment

- Identify key open issues and forums where they can be resolved